REMARKS/ARGUMENTS

In view of the amendments and remarks herein, favorable reconsideration and allowance of this application are respectfully requested. By this Amendment, claims 1, 2, 4-8, 10, 12-13, 15-19, and 21 have been amended to remove potential means/step-plus-function language and to clarify the subject matter thereof. Claims 1-22 are pending for further examination.

Claims 1-22 stand rejected under 35 U.S.C §103(a) as being unpatentable over Sangwine in view of Miller and further in view of Atherton et al. Applicant submits that the applied references do not teach or suggest all elements of the claimed combination.

While Sangwine does teach a typical color determination (i.e. using the three RGB components of a color to determine a display color), this is not what Applicant has claimed. Applicant has claimed, for example, "the threshold values being used for dividing a coordinate region for the brightness vector into at least three regions." Sangwine says nothing about dividing a coordinate region into at least three regions. Simply because the color determination of Sangwine is based on three components does not mean that Sangwine has taught dividing a coordinate region into at least three regions based on the threshold values.

After dividing a coordinate region into regions based on the threshold values, Applicant's system "determine[es], for each of the predetermined units, a region including a tip of the brightness vector calculated by the brightness calculator from among the regions obtained via division by the threshold values based on whether or not

the illumination intensity of each of the *n* illumination intensities is greater than, less than or equal to the corresponding threshold value," as required by independent claim 1 and its dependents. Independent claims 10, 12 and 21 require similar, but not necessarily identical limitations.

The above noted claim limitation corresponds to comparing the actual value of each of the *n* illumination intensities to the corresponding threshold value, and determining on which side of the threshold division that "coordinate" lies. Once this has been done for all of the *n* illumination values, the region in which the vector tip (the vector being an *n*-dimensional vector) lies may be determined.

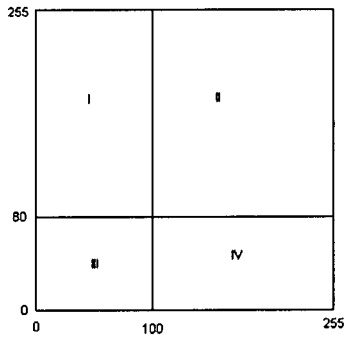
Nothing in any of the prior art of record teaches or suggests that such a comparison is made, nor a determination as to in which region a vector tip then lies (the regions having been determined as claimed).

Finally, Applicant has claimed and "display color determining programmed logic circuitry for determining a display color for each of the predetermined units based on the region." This corresponds to selecting the color assigned to the whole region in which the vector tip lies and applying it.

A description of an exemplary embodiment of Applicant's system follows:

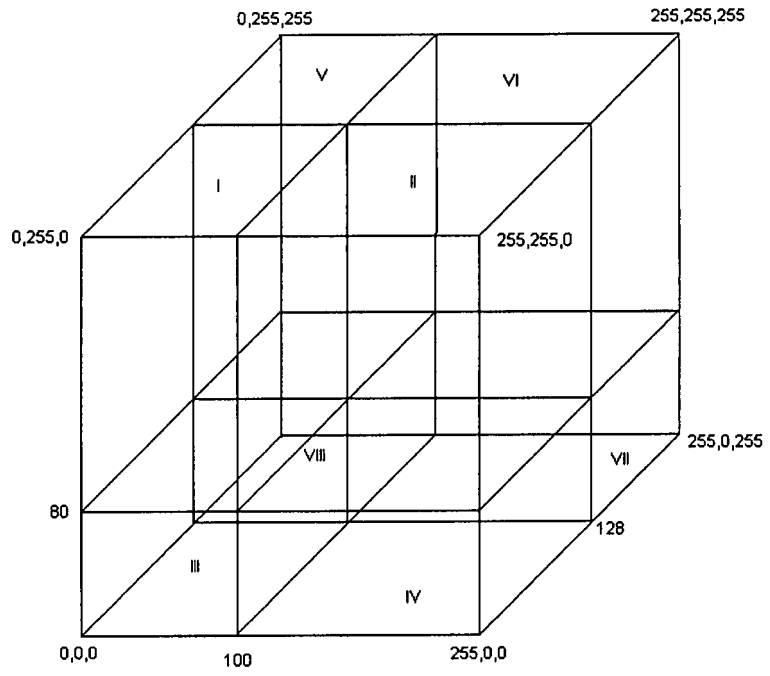
Assume, for example, that illumination intensities range from 0-255, and that n = 2. Then take a 2-dimensional coordinate space and divide it at some location along each axis, the division point being the threshold value. This will give a plurality (four in this

example) of quadrants (the "regions"). If the first threshold is 100 and the second threshold is 80, the regions might then appear as follows:



Next, two illuminations are considered, $I_1 = 72$ and $I_2 = 150$. The vector tip thus lies at 72, 150, or in quadrant I. Each of quadrants I-IV has a color value assigned thereto, and any vector landing in the given quadrant correlates with that value, and the unit from which the vector was produced is then assigned that color value.

A similar calculation can be represented in three dimensional space as follows (once *n* exceeds 3, it is more difficult to represent the system graphically):



In this case, $n = 3$, so we have a 3-coordinate vector, for example (20, 200, 180). This vector tip would then lie in quadrant VIII, and the color value assigned to quadrant VIII would be assigned to the unit whose three illumination intensities were 20, 200, and 180.

No such divisions, comparisons and determinations are taught or suggested by any of the prior art. The cited teaching from Miller only teaches how to reassign coordinates in a (255,255,255) cube to a (1,1,1) cube using simple division.

Applicant has shown the 3-dimesional example above to help distinguish from the teachings of the prior art. If the cube above were the cube of Sangwine or Miller, each individual point within the cube would have a different color value assigned to it. There are no regions of the Sangwine and Miller cubes, only points. The cubes of Sangwine

and Miller are not divided by any threshold values, they are bounded by maximum values. Assignments of color based on those cubes are similarly not done by region, only by point. Finally, there is no determination of in which region a vector lies based on whether its components are each greater than, less than or equal to a corresponding threshold value, there is simply a determination of what point is selected based on which values each of the three components ranging from 0-255 or 0-1 are equal to.

For at least these reasons, Applicant submits that claim 1 is allowable over the prior art of record. Independent claims 10, 12, and 21 recite similar limitations and should be allowable for at least similar reasons. Claims 2-9, 11, 13-20 and 22 should be allowable based at least on their dependency from allowable claims 1, 10, 12, and 21.

For at least the foregoing reasons, Applicant respectfully submits that the invention defined by the amended claims herein is not taught or suggested by the prior art of record. Thus, withdrawal of the rejections and allowance of this application are earnestly solicited.

Should the Examiner have any questions, please do not hesitate to call the undersigned attorney at the phone number below.

Respectfully submitted,

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